



VIA ELECTRIC SUBMISSION TO:
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Mr. Bryce Bird, Director
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Subject: Chevron Comments to: (i) Proposed Amendments to Utah State Implementation Plan, Section IX, Part H; and (ii) Chevron Salt Lake Refinery PM_{2.5} SIP Evaluation Report

Dear Mr. Bird:

The Chevron Products Company Salt Lake Refinery (the “Salt Lake Refinery”) appreciates the opportunity to provide these comments regarding the Utah Department of Environmental Quality, Division of Air Quality (“DAQ”): (1) proposed amendments to the Utah State Implementation Plan (“Utah SIP”), Section IX (Control Measures for Area and Point Sources), Part H (Emission Limits and Operating Practices) regarding particulate matter emissions (the “PM SIP” or the “Rule”);¹ and (2) the Technical Support Document for Section IX, Part H.12 of the PM SIP evaluating the Salt Lake Refinery as it relates to the Salt Lake City PM_{2.5} Nonattainment Area (the “Salt Lake Refinery PM_{2.5} SIP Evaluation Report”).² We look forward to working with DAQ staff to facilitate the necessary changes to the proposed PM SIP and the Salt Lake Refinery PM_{2.5} SIP Evaluation Report to address these important issues.

I. Proposed Amendments to the Particulate Matter SIP

¹ Available at: <https://documents.deq.utah.gov/air-quality/planning/air-quality-policy/DAQ-2018-006551.pdf>

² Available at: <https://documents.deq.utah.gov/air-quality/pm25-serious-sip/DAQ-2018-007373.pdf>

Comment No. 1: References to Compressor Engines Should Be Consistent with DAQ Administrative Order

There are three (3) 391 horsepower 4-stroke rich burn spark ignition reciprocating internal combustion engines (“RICE”) located at the Salt Lake Refinery. These engines are identified as K35001, K35002, and K35003 in the Refinery’s Administrative Order (“AO”) issued by DAQ.³ The AO sets forth the *same* NO_x emission limits for these RICE as is set forth in Subsections IX.H.2.d.v.A and IX.H.12.d.v.A of the PM SIP. However, Subsections IX.H.2.d.v.A and IX.H.12.d.v.A refer to these engines as “Engine Number 1, 2, and 3” instead of “K35001, K35002, and K35003”. To avoid any ambiguity between these subsections of the PM SIP and the AO regarding these RICE, we request that Subsections IX.H.2.d.v.A and IX.H.12.d.v.A be revised as follows:⁴

Subsection IX.H.2.d.v.A

<u>Engine Number</u>	<u>NO_x in ppmvd @ 0% O₂</u>
1 <u>K35001</u>	236
2 <u>K35002</u>	208
3 <u>K35003</u>	230

Subsection IX.H.12.d.v.A

<u>Engine Number</u>	<u>NO_x in ppmvd @ 0% O₂</u>
1 <u>K35001</u>	236
2 <u>K35002</u>	208
3 <u>K35003</u>	230

Comment No. 2: Method for Calculating Compliance with Flare Flow Requirements Should Be Consistent for PM_{2.5} and PM₁₀

As DAQ is aware, the PM SIP requirements regarding the PM₁₀ Nonattainment/Maintenance Area and the PM_{2.5} Nonattainment/Maintenance Area largely mirror one another.⁵ While these provisions are nearly identical, there are instances in which these provisions are inconsistent or incorrect, and thus, should be appropriately corrected. First, Subsection IX.H.1.g.v., which provides the general requirements for hydrocarbon flares located in the *PM₁₀* Nonattainment/Maintenance Area, references hydrocarbon flares at petroleum refineries located in or affecting a *PM_{2.5}* non-attainment area in Utah. The reference to “PM_{2.5}” instead of “PM₁₀” in Subsection IX.H.1.g.v appears to be in error and should therefore be revised as follows (which reflects acceptance of the other DAQ-proposed changes to this provision):

³ See DAQE-ANI01190097-18, Section II.B.8.a, p. 11 (April 13, 2018).

⁴ Recommended insertions are shown in underlined text and deletions are shown in ~~strikethrough~~.

⁵ See, e.g., Subsections H.1 (General Requirements: Control Measures and Point Sources, Emission Limits and Operating Practices, PM₁₀ Requirements) and H.11 (General Requirements: Control Measures and Point Sources, Emission Limits and Operating Practices, PM_{2.5} Requirements).

Subsection IX.H.1.g.v.

- A. All hydrocarbon flares at petroleum refineries located in or affecting a designated PM_{2.5/10} non-attainment area or maintenance area within the State shall be subject to the flaring requirements of NSPS Subpart Ja (40 CFR 60.100a–109a), if not already subject under the flare applicability provisions of Ja.
- B. No later than January 1, 2019, all major source petroleum refineries in or affecting a designated PM_{2.5/10} non-attainment area within the State shall either 1) install and operate a flare gas recovery system designed to limit hydrocarbon flaring produced from each affected flare during normal operations to levels below the values listed in 40 CFR 60.103a(c), or 2) limit flaring during normal operations to 500,000 scfd for each affected flare. Flare gas recovery is not required for dedicated SRU flare and header systems, or HF flare and header systems.

Second, the Salt Lake Refinery is subject to general requirements for hydrocarbon flares set forth in Subsections IX.H.1.g.v. (PM₁₀ Nonattainment/Maintenance Area) and IX.H.11.g.v. (PM_{2.5} Nonattainment/Maintenance Area). However, the calculation method—that is specific to the Salt Lake Refinery—for determining compliance with both Subsections IX.H.1.g.v.B and IX.H.11.g.v. appears in Subsection IX.H.12.d.vi.A (PM_{2.5} Nonattainment/Maintenance Area), but there is no parallel Subsection IX.H.2.d.vi.A (PM₁₀ Nonattainment/Maintenance Area). The omission of Subsection IX.H.2.d.vi.A appears to be in error, and thus, it should be included as follows:

New Subsection IX.H.2.d.vi.A

vi. Flare Calculation

A. Chevron’s Flare #3 receives gases from its Isomerization unit, Reformer unit well as its HF Alkyltion Unit. The HF Alkyltion Unit’s flow contribution to Flare #3 will not be included in determining compliance with the flow restrictions set in IX.H.1.g.v.B.

Comment No. 3: Application of U.S. EPA NSPS Ja Provisions to the Salt Lake Refinery is Inappropriate

The PM SIP inappropriately proposes to apply certain requirements of U.S. EPA’s New Source Performance Standards for Petroleum Refineries, codified in 40 C.F.R., Part 60, Subpart Ja (“NSPS Ja”). Subsections IX.H.1.g.i.A.II and IX.H.11.g.i.A.II require demonstration of compliance with the Fluid Catalytic Cracking Units (“FCCU”) SO₂ limit in accordance with 40 C.F.R. section 60.105a(g). In addition, Subsections IX.H.1.g.i.B.III and IX.H.11.g.i.B.III require that FCCU install and operate continuous parameter monitoring system (“CPMS”) in accordance with 40 C.F.R. section 60.105a(b)(1).⁶

⁶ We note that Subsections IX.H.1.g.i.B.III and IX.H.11.g.i.B.III require CPMS to measure operating parameters for determining source-wide particulate matter *emissions*. This appears to be in error, as CPMS are required under NSPS Ja to measure and record *operating parameters* of control devices such as power input, pressure drop, liquid feed rate, exhaust gas flow rate, coke burn-off rate, as well as FCCU hours of operation—not emissions. 40 C.F.R. § 105a(b)(1). This provision also

Imposing NSPS Ja in this regard is inappropriate as these provisions require implementation of costly monitoring equipment without any corresponding reduction in particulate matter emission. Specifically, FCCUs at the Salt Lake Refinery are subject to 40 C.F.R., Part 60, Subpart J (“NSPS J”), not NSPS Ja. As a result, these facilities would incur potentially large capital costs and need to implement extensive operating changes required by NSPS Ja. For example, 40 C.F.R. 60.105a(b)(1) requires an outlay of considerable resources to install, operate and maintain a CPMS. Importantly, however, deployment of such extensive monitoring equipment will have *no* corresponding reduction of particulate matter emissions, as particulate matter and SO₂ emission limits for FCCU are the *same* under NSPS J and Ja.⁷ While NSPS Ja requires extensive monitoring equipment, particulate matter emissions are determined under NSPS J in accordance with prescribed stack tests, a method clearly endorsed under other provisions of the Rule.⁸ Further, NSPS Ja requires control device parameter monitoring for which the Salt Lake Refinery has no corresponding operating limit. It simply makes no sense to monitor a parameter for which there is no corresponding operating limit.

The *ad hoc* application of certain NSPS Ja provisions in this regard to the Salt Lake Refinery, which is not subject to NSPS Ja (only NSPS J)—without any associated reductions in particulate matter emissions—is arbitrary and capricious. In light of these concerns, these provisions should be revised as follows:

Subsection IX.H.1.g.i.A.II

Compliance with this limit shall be determined by using a CEM in accordance with IX.H.1.f following 40 C.F.R. §60.105a(g).

Subsection IX.H.11.g.i.A.II

Compliance with this limit shall be determined by using a CEM in accordance with IX.H.1.f following 40 C.F.R. §60.105a(g).

Subsection IX.H.1.g.i.B.III

~~[By n]No later than January 1, 2019, each owner or operator of an FCCU shall install, operate and maintain a continuous parameter monitor system (CPMS) to measure and record operating parameters from the FCCU for determination of source wide [PM10]particulate emissions as per the requirements of 40 CFR 60.105a(b)(1).~~

Subsection IX.H.11.g.i.B.III

~~[By n]No later than January 1, 2019, each owner or operator of an FCCU shall install, operate and maintain a continuous parameter monitor system (CPMS) to measure and record operating parameters for determination of source wide PM2.5 emissions as per the requirements of 40 CFR 60.105a(b)(1).~~

II. Chevron Salt Lake Refinery PM_{2.5} SIP Evaluation Report

appears to conflict with Subsection IX.H.2.d.1.A. that provides for the use of *stack tests* (not CPMS operating parameters) for determining emission factors for source-wide particulate matter emissions.

⁷ See 40 C.F.R. §§ 60.102(a)(1), 60.104(b)(1), 60.102a(b)(1)(iii), and 60.102a(b)(3).

⁸ Subsection IX.H.2.d.1.A. (providing for the use of stack tests for determining emission factors for source-wide particulate matter emissions); see 40 C.F.R. § 60.106(b).

We have identified numerous factual and other errors in the Salt Lake Refinery PM_{2.5} SIP Evaluation Report that should be corrected. The identified errors and the basis for making these corrections are provided below.

<u>Comment</u>	<u>Page No.</u>	<u>Section</u>	<u>Correction</u>	<u>Basis for Correction</u>
1.	1.	1.2	“The source consists of two <u>one</u> FCCUs, . . .”	The Salt Lake Refinery has one FCCU, not two.
2.	2.	1.3	• “VGO Furnace #2”	Typographical error. The bullet point is out of place.
3.	2.	1.3	“ <u>2</u> Tail Gas Treatment Unit and Tail Gas Incinerator”	The Salt Lake Refinery has two TGU/TGIs, one for each SRU.
4.	2.	1.4	Table 2 should reference “PM _{2.5} ” instead of “PM ₁₀ ”.	Emissions listed are for PM _{2.5} .
5.	3.	2.0	“In 2015, an AO was issued to incorporate consent decree required NO _x limits on the FCCU regenerator stack reformer compressor drivers. ”	The AO incorporated NO _x limits required for the reformer compressor drivers.
6.	5.	4.0	“ In 2016, Chevron <u>will</u> replaced existing boilers #1, #2, and #4 with a new boiler (#7).”	This work is still ongoing. Boiler #7 is in the process of startup, and Boilers #1, #2, and #4 have not yet been decommissioned.
7.	11.	5.1.3	“Both the fabric filter and FGF control only the filterable fraction of particulate emissions.”	Typographical error.
8.	15.	5.3.3	“While Chevron has a current limit of 59 <u>57.8</u> ppm NO _x on a 365-day rolling average for the FCC”	The NO _x limit for the Salt Lake Refinery is 57.8.
9.	17.	6.1	“It should be noted, that in Chevron’s case, the effluent gases from both SRUs are sent to a single <u>the two</u> TGTU and TGI units.”	The Salt Lake Refinery has two TGU/TGIs, one for each SRU.

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<u>Comment</u>	<u>Page No.</u>	<u>Section</u>	<u>Correction</u>	<u>Basis for Correction</u>
10.	22.	11.1.3	“For its part, Chevron implemented a flare gas recovery system on its hydrocarbon flares, <u>Flare 1 and Flare 2</u> , as part of the C.U.R.E. project in 2011. This system greatly reduced the emissions from both the North and South Flares, transforming both emission units into true “upset only” flares.	The Salt Lake Refinery installed flare gas recovery on Flares 1 and 2. The Refinery does not have a “North” or “South” flare; therefore, the second sentence appears to not apply to the Salt Lake Refinery.
11.	25.	12.3.3	In reference to the feasibility of carbon canister/oxidation for controlling VOCs at the WW Treatment emission unit in Table 12-2: “Yes, see below <u>No.</u>”	VOC emissions from the WW Treatment Plant are controlled by a Regenerative Thermal Oxidizer (RTO), and any installation of carbon canisters/oxidizers would be physically impossible.
12.	26.	12.3.3	“The costs for WGS or a second TGTU on the SRU do not currently justify including either of these <u>this</u> controls as MSM.”	The Salt Lake Refinery has two TGU/TGIs, one for each SRU.

We appreciate DAQ’s willingness to meet with stakeholders throughout this process and appreciate the opportunity to provide comments on this matter. We look forward to working with DAQ staff to address these concerns and to make the necessary changes to the proposed Rule and the Salt Lake Refinery PM_{2.5} SIP Evaluation Report.

Sincerely,

Mitra Kashanchi